

# Claims

- [c1] 1.A radome for a reflector antenna having a reflector with a vertex area, comprising:  
a central portion surrounded by an outer portion;  
the central portion having a radius configured to focus a reflected component of an RF signal reflected by the reflector antenna to the vertex area; and  
the outer portion having a radius greater than the central portion.
- [c2] 2.The apparatus of claim 1, wherein a transition between the central portion and the outer portion is located at a position where the reflected component from the outer portion closest to the transition reflects from the reflector without intersecting with a feed assembly of the reflector antenna.
- [c3] 3.The apparatus of claim 1, wherein the radome is injection molded dielectric plastic.
- [c4] 4.The apparatus of claim 1, further including a plurality of tabs formed proximate a periphery of the radome; the tabs configured to pass through a corresponding plurality of cut outs formed in a periphery of the reflector antenna.

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- [c5] 5.The apparatus of claim 4, wherein the tabs retain the radome on the reflector when the radome is rotated after the tabs are passed through the cut outs.
- [c6] 6.The apparatus of claim 4, further including a plurality of support posts formed proximate the periphery of the radome which the reflector seats against when the tabs are passed through the cut outs.
- [c7] 7.The apparatus of claim 4, further including a plurality of locking clips configured to compress when the tabs are passed through the cut outs;  
the locking clips decompressing into the cut outs when the radome is rotated after the tabs are passed through the cut outs;  
the locking clips decompressed into the cut outs inhibiting further rotation of the radome.
- [c8] 8.The apparatus of claim 1, further including a plurality of absorbing retainers arranged proximate a periphery of the radome.
- [c9] 9.The apparatus of claim 1, further including RF absorbing material located in the vertex area.
- [c10] 10.A radome for a reflector antenna having a reflector

with a vertex area, comprising:

a radome adapted to cover an open end of the reflector;

a plurality of tabs formed proximate a periphery of the radome;

the tabs configured to pass through a corresponding plurality of cut outs formed in a periphery of the reflector.

[c11] 11.The apparatus of claim 10, wherein the tabs retain the radome on the reflector when the radome is rotated after the tabs are passed through the cut outs.

[c12] 12.The apparatus of claim 10, further including a plurality of support posts formed proximate the periphery of the radome which the reflector seats against when the tabs are passed through the cut outs.

[c13] 13.The apparatus of claim 10, further including a plurality of locking clips configured to compress when the tabs are passed through the cut outs;  
the locking clips decompressing into the cut outs when the radome is rotated after the tabs are passed through the cut outs;  
the locking clips decompressed into the cut outs inhibiting further rotation of the radome.

[c14] 14.The apparatus of claim 10, further including a plural-

ity of absorbing retainers arranged proximate a periphery of the radome.

- [c15] 15.A reflector antenna, comprising:  
a reflector with a vertex area;  
a feed assembly coupled to the reflector proximate the vertex area;  
a plurality of cut outs in a periphery of the reflector;  
a radome adapted to cover an open end of the reflector;  
the radome having a plurality of tabs arranged to correspond with the cut outs;  
the tabs and the cut outs co-operating to removably secure the radome to the reflector;  
the radome having a central portion with a radius selected to focus a reflected component of RF signals transmitted by the reflector antenna upon the vertex area; and  
the vertex area covered by an RF absorbing material.
- [c16] 16.The reflector antenna of claim 15, further including a surrounding portion of the radome having a larger radius than the central portion.
- [c17] 17.The reflector antenna of claim 15, further including a plurality of absorbing retainers proximate a periphery of the radome; the absorbing retainers retaining a ring of RF absorbing material.

- [c18] 18. An antenna comprising:  
a feed;  
a reflector; and  
a radome adapted to cover said reflector;  
the reflector and radome having interlocking peripheral structures configured such that said radome is joined to said reflector by mating said structures and rotating said radome relative to said reflector.
- [c19] 19. The antenna of claim 18 wherein one of said reflector and radome has cut-outs spaced about its periphery and the other has mating tabs adapted to be received into said cut-outs when said radome and reflector are mated before said rotating.
- [c20] 20. An antenna comprising:  
a self supported feed assembly;  
a circular reflector; and  
a circular radome adapted to cover said reflector;  
the reflector and radome having interlocking peripheral structures configured such that said radome is joined to said reflector by mating said structures and rotating said radome relative to said reflector.
- [c21] 21. A circular radome for a circular reflector antenna having about its periphery a twist-lock interconnection

structure configured to interlock with a mating interconnection structure on the reflector when the radome is rotated relative to the reflector.

- [c22] 22. A circular antenna reflector adapted to mate with a circular radome, the reflector having about its periphery a twist-lock interconnection structure configured to interlock with a mating interconnection structure on the radome when the radome is rotated relative to the reflector.